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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/526,672 | 03/04/2005 | Hisashi Maeshima | 3273-0208PUS1 | 3246 |
| 2292 7590 12/10/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | EXAMINER SELLERS, ROBERT E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1796 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/526,672

Applicant(s)

MAESHIMA ET AL.

Examiner

Robert Sellers

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 6-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claims 6-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. The election was made **without** traverse in the reply filed on November 15, 2007.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of copending application no. 10/567,253 in view of the following references:

HCAPLUS accession no. 1972:526335 for the Neftekhimiya article by Yur've et al.,

Takai Publication No. 2003/0059618,

German Patent No. 1,418,465;

Japanese Patent No. 54-3006 (Japanese '006),

the translation of the Hau article (presented in the Information Disclosure

Statement filed November 27, 2006, last page), and

Japanese Patent No. 5-239043 (Japanese '043).

1. Claim 4 of the copending application depicts the claimed bicyclohexyl diepoxide. The instantly claimed process of preparation by epoxidizing the bicyclohexyl diene with an organic percarboxylic acid is not recited. The additional presence of the other components is not precluded from the claimed process once the bicyclohexyl diepoxide is prepared.
2. Yur'Ve et al. sets forth the epoxidation of bicyclohexyl-3,3'-diene (i.e. bi-3-cyclohexenyl-1-yl according to registry no. 37746-25-1) to bicyclohexyl diepoxide (registry no. 37777-16-5) in the presence of a percarboxylic acid.
3. Takai (page 2, paragraph 23) discloses the epoxidation of bicyclohexyl diepoxide with a divalent bridging group X with peracetic acid having a water content of 0.47% (page 14, Production Example 1, paragraph 185) obtained by the air oxidation of an acetaldehyde-ethyl acetate solution.
4. The German patent and Japanese '006 is acknowledged in the instant specification in the paragraph bridging pages 26-27 as teaching the process of preparing the peracetic acid denoted in instant claim 2 in order to yield a high concentration at a low price.

5. The Hau article reports the synthesis of peracetic acid by oxidizing an aldehyde to eliminate water to prevent the hydrolysis of the epoxy groups.

6. Japanese '043 espouses the epoxidation of cyclohexene by peracetic acid treated with ethyl acetate to provide high selectivity and conversion (HCAPLUS abstract).

7. It would have been obvious to prepare the bicyclohexyl diepoxide of claim 4 of the copending application by epoxidizing bicyclohexyl diene in the presence of a percarboxylic acid as taught by Yur've et al. using an ethyl acetate solution of peracetic acid as per Takai, the German patent as well as Japanese '006 and '043 and having little or no water as shown in Takai and Hau in order to optimize the selectivity and conversion (Japanese '043) and prevent the hydrolysis of the epoxy groups (Takai, page 4, paragraph 47 and Hau).

This is a provisional obviousness-type double patenting rejection.

Claims 1-5 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5 and 6 of copending application no. 10/883,162 in view of the same references as listed in the previous obviousness-type double patenting rejection.

8. The claims of the copending application exhibits the claimed bicyclohexyl diepoxide. The instantly claimed process of preparation by epoxidizing the bicyclohexyl diene with an organic percarboxylic acid is not recited. The additional presence of the

curing agent and/or curing accelerator is not precluded from the claimed process once the bicyclohexyl diepoxide is prepared.

9. It would have been obvious to prepare the bicyclohexyl diepoxide of the claims of the copending application by epoxidizing bicyclohexyl diene in the presence of a percarboxylic acid as taught by Yur've et al. using an ethyl acetate solution of peracetic acid as per Takai, the German patent as well as Japanese '006 and '043 and having little or no water as shown in Takai and Hau in order to optimize the selectivity and conversion (Japanese '043) and prevent the hydrolysis of the epoxy groups (Takai, page 4, paragraph 47 and Hau).

This is a provisional obviousness-type double patenting rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yur've et al. in view of the following prior applied in the rejections explained hereinabove:

Takai Publication No. 2003/0059618,

German Patent No. 1,418,465;

Japanese Patent No. 54-3006 (Japanese '006),

the translation of the Hau article (presented in the Information Disclosure Statement filed November 27, 2006, last page), and
Japanese Patent No. 5-239043 (Japanese '043).

10. The references are discussed in previous paragraphs 2-6. Yur've et al. reports the epoxidation of bicyclohexyl-3,3'-diene to bicyclohexyl diepoxide in the presence of dimethylethyl hydroperoxide (registry no. 75-91-2). The claimed epoxidation with an organic percarboxylic acid is not recited.

11. It would have been obvious to prepare the bicyclohexyl diepoxide of Yur've et al. using an ethyl acetate solution of peracetic acid as per Takai, the German patent as well as Japanese '006 and '043 and having little or no water as shown in Takai and Hau in order to optimize the selectivity and conversion (Japanese '043) and prevent the hydrolysis of the epoxy groups (Takai, page 4, paragraph 47 and Hau).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

/Robert Sellers/

Robert Sellers
Primary Examiner
Division 1796

rs 12/5/2007